

TURF TIPS — THE BEST KEEP COMING

Tree Snags — A Tree Even an Agronomist Can Love!

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DURING the past year of travel with the USGA's regional agronomists, I've learned many turf tips! One that surprised me at first was this advice: "Create more air circulation and *cut* those trees down; we can't have tree roots competing with the turf, *nor* can we tolerate the shade created by those trees!"

As the USGA's environmental specialist, I work closely with the Audubon Cooperative Sanctuary Program for Golf Courses (ACSP), a program that encourages habitat preservation and enhancement. The above advice was not exactly music to my ears. However, I soon recognized, as do the specialists with the Audubon Cooperative Sanctuary Program for Golf Courses, that the pros and cons of any situation must be weighed. Removal of a tree to reduce pesticide applications in a particular area and the planting of a new tree in a more appropriate location may well represent the most environmentally responsible solution. Before you run

out to the golf course and cut down those habitat-providing trees for the good of the turf, though, let me tell you about *tree snags* — a tree even my colleagues, the agronomists, can accept on the golf course.

Tree Snags

Commonly referred to as dead trees, tree snags provide cavities for nesting birds and animals. More than one-third of all forest-dwelling birds and mammals require a hole or cavity in a tree for nesting and shelter.

The scarcity of natural tree snags seriously limits the number of cavity nesters in some areas to the point of endangered status. Cavity nesters include wood ducks, bluebirds, woodpeckers, owls, chickadees, and titmice, to name a few, as well as cavity-dwelling mammals like flying squirrels, raccoons, and white-footed mice.

Most cavity-dwelling birds are insect eaters and can be beneficial to the golf

course (such as the eastern bluebird, great crested flycatcher, white-breasted nuthatch), for their helpful efforts in pest control. Owls can be beneficial in rodent control. Some species, like the barn owl (family of eight) are estimated to consume 1,000 rodents in a single nesting season.

Various cavity-nesting birds and mammals have different preferences for tree snag size, location (height of nest), and territory size. Downy woodpeckers, seen most often at backyard feeders, require only 10 acres for territory size, prefer an 8" DBH (diameter at breast height) tree for nesting, and prefer their nest to be approximately 20' above ground. In contrast, the pileated woodpecker, much more of a rarity, requires 35-175 acres territory size, prefers a tree of 22" DBH, and a nest height location of 60'. The Georgia Department of Natural Resources recommends at least eight tree snags per acre or more, if possible, to satisfy cavity-nesting needs. For a 20-acre woodlot, the U.S. Forest

Cavity nesting species (screech owl), a resident at the Rumson Country Club, Rumson, New Jersey.



Tree snags located in the wooded out-of-play area of The Honors Course, Ooltewah, Tennessee, provide excellent cavities for nesting birds and animals.



Service recommends four or five snags of 18" DBH, 30 to 40 snags over 14" DBH, and 50 to 60 snags over 6" DBH. Recognizing this need and the scarcity of cavities remaining in our forests, no cavity or tree snag should ever be cut *unless* it is a safety hazard. If a live or dead tree must go because of safety reasons or because the negatives outweigh the benefits, and there is a limited number of natural tree snags on the golf course, supplement with a variety of artificial nest boxes. This effort can partially compensate for the loss of natural tree snags.

A golf course has tremendous potential to help compensate for the scarcity of cavities elsewhere. Golf course superintendents and course officials can take an active role in conservation by recognizing the value of tree snags and by preserving them. Trees of various types and sizes make for fine cavity nests. No tree should be considered too small or too insignificant. Suitable trees



Artificial nest boxes, including this wood duck box, can help compensate for the scarcity of natural tree snag cavities.

for cavity excavation should have rotten heartwood (interior wood) at the appropriate height for desired species. Those with rotten heartwood are easily excavated by the primary excavators, the woodpeckers. A live tree that has rotten heartwood is ideal, since the excavation is easy but the outer tough sapwood provides excellent defense from predators. The least desirable tree snags are those that have outer sapwood rot with healthy interior heartwood, resulting in a difficult excavation and shallow nests that are vulnerable to predators.

From a turf standpoint, the tree snag is the perfect tree; it *does not* have growing root systems that compete with the turf, it *does not* have a dense, shade-producing canopy, it *does not* have dense branching that reduces air circulation, *and* there is the added benefit that it provides habitat for and welcomes those insect-eating birds that can help with pest-control efforts!

Fire in the Hole

by **JAMES FRANCIS MOORE**
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THE FILE CABINETS of each Green Section office contain reports written to golf courses for the past 40 years. Even the earliest of these reports frequently contain recommendations urging the pruning or complete removal of trees that prevent the growth of healthy turf. But recommendations are the easy part. Unfortunately, convincing club officials to allow such work is often next to impossible.

Of all the clubs visited in the Mid-Continent Region over the past seven years, the most successful tree program I have witnessed has been instituted by Southern Hills Country Club, in Tulsa, Oklahoma, under the direction of the superintendent, Bob Randquist, CGCS. The key points to Bob's success in obtaining the support of the membership have included:

1. Preparing a comprehensive tree resource inventory which identified and

cataloged all the trees on the property. This included identifying trees that should be removed to ensure good species variety, overall tree health, and proper spacing for the benefit of the remaining specimens. In addition to providing direction for future tree work from an arboricultural viewpoint, the survey added a great deal of credibility to Bob's plans in the eyes of the membership.

2. Soliciting outside opinions concerning the need to accomplish tree work for the sake of the turf. Dr. Joe Duich and I independently emphasized that the greens and other turf areas would continue to suffer at Southern Hills until tree work was accomplished to provide vital light and air movement, and reduce root competition.

3. Acquiring the necessary equipment to prune and remove the appropriate trees. The most important of the equip-

ment was a "cherry picker" or bucket truck that allowed much of the work to be accomplished rapidly and safely.

The final step, and the subject of this "turf tip," was the construction of a tool to dispose of the tremendous amount of refuse resulting from the pruning of every tree on the golf course and the complete removal of over 80 trees over a two-year period. Contract hauling from the property easily would have been the most expensive aspect of this job. Open burning on a course located near the middle of Tulsa seemed out of the question — until Bob contacted the EPA Air Quality Board and obtained the plans for constructing a forced-air incinerator for burning brush.

The device itself was constructed by Bob's staff and consisted of a motor-driven fan, a long metal casing or tube, and a manifold for directing air into the hole. Since the EPA directed that the